

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1 – 6: Cancelled

7. (Currently Amended) An apparatus for heating and melting solid lubricants in a delivery drum, comprising:

a heating element composed of armored resistors shaped as concentric rings and junction spokes;

a hoist adapted to lower and raise said heating element into and out of said drum;

vertical rods that connect said heating element to components of said hoist, wherein said vertical rods are not heated adapted to be unheated;

a first thermal sensor operatively connected with said heating element;

a second thermal sensor mounted on said vertical rods;

a transfer pump for withdrawing melted lubricant from said drum via a suction tube;

a bottom valve mounted at a foot of said suction tube; and

a lubricant delivery tube connected to an output side of said pump.

8. (Previously Presented) An apparatus according to claim 7, wherein said heating element is subjected to thrust derived from its own weight and the weight of movable masses of said vertical rods, components of said hoist, said transfer pump, and said suction tube.

9. (Previously Presented) An apparatus according to claim 7, wherein

said delivery tube is coaxially disposed in a jacket, and wherein a diathermic fluid is adapted to circulate within said jacket for heating said delivery tube.

10. (Currently Amended) A method of operating an apparatus for heating and melting solid lubricants in a delivery drum, the apparatus comprising a heating element composed of armored resistors shaped as concentric rings and junction spokes; a hoist adapted to lower and raise said heating element into and out of said drum; vertical rods that connect said heating element to components of said hoist, wherein said vertical rods are unheated; a first thermal sensor operatively connected with said heating element; a second thermal sensor mounted on said vertical rods; a transfer pump for withdrawing melted lubricant from said drum via a suction tube; a bottom valve mounted at a foot of said suction tube; and a lubricant delivery tube connected to an output side of said pump, the apparatus of claim 7, the method including the step of controlling the temperature of said heating element by means of said first and second thermal sensors at a melting temperature and a maintenance temperature respectively, wherein said temperatures are predetermined for melting said lubricants but are such as to prevent harmful overheating thereof.

11. (Previously Presented) A method according to claim 10, wherein after said heating element has reached a bottom dead center of said drum upon at least substantial melting of the entire mass of said lubricant, said first thermal sensor keeps said heating element at said melting temperature until the entire mass of said lubricant is melted.

12. (Previously Presented) A method according to claim 11, wherein said second thermal sensor is mounted on said vertical rods at approximately one third of their height as measured from a bottom thereof, and wherein after the entire mass of

said lubricant has been melted, said second sensor keeps said heating element at said maintenance temperature.